

## REMARKS

Claims 1, 4, 6, 7, 10-22, 24 and 26-34 are pending. Claims 2, 3, 5, 8, 9, 23, 25 and 35-54 are canceled.

1. Claims 1, 4, 6, 7, 10-22, 24, and 26-34 were rejected under 35 U.S.C. 112, first paragraph. Based on the allegation that the specification does not enable a person skilled in the art to which it pertains or with which it is most nearly connected to make the invention commensurate in scope with the claims. Applicants have amended claim 1 to recite a water based solution including a polymer in an emulsion and have amended claim 22 to recite a latex emulsion. In addition, claims have been amended to recite "activated" boehmite particles. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 112, first paragraph rejection.

2. Claims 1, 4, 6, 7, 10-22, 24, and 26-34 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 6 of copending application No. 10/978,286. The PTO asserts that the composite disclosed in the copending application would encompass any flow and leveling property including the instant at least 6 mils inherently. Applicants respectfully disagree with this rejection.

Nevertheless, Applicants hereby submit a provisional terminal disclaimer rendering the obviousness type double patenting rejection moot. As such, Applicants respectfully request reconsideration and withdrawal of the obviousness type double patenting rejection.

3. Claims 1, 4, 6, 7, 10-22, 24, and 26-34 were rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bugosh (U.S. 2,915,475). Applicants respectfully traverse these rejections.

Present claim 1 is directed to a surface coating solution including a water based solution including a polymer in an emulsion and including activated boehmite particles provided in the water based solution in an amount of 0.1 wt % to 20.0 wt %. The activated boehmite particles include mainly anisotropic shaped particles having an aspect ratio of at least 3:1. The surface

coated solution has a flow and leveling of at least 6 mils and the surface coating solution is essentially free of associative thickener.

Present claim 22 is directed to a surface coating solution comprising a latex emulsion and activated boehmite particles in an amount between 0.1 wt % and 20.0 wt %. The activated boehmite particles include mainly anisotropically shaped particles having an aspect ratio of at least 3:1 and a longest dimension of at least 50 nanometers. The surface coating solution has a flow and leveling of at least 6 mils and the surface coating solution is essentially free of an associated thickener.

Bugosh is directed to fibrous aluminum monohydrate particles. Bugosh further discloses that fibrous boehmite can be used as reinforcing filler and making plastic, films, coatings, paints, adhesives or other plastic articles. Bugosh generally discloses that organic plastic materials which are especially benefited by incorporation of 1 to 40% fibrous boehmite in a list of polymers and that fibrous boehmite may be mixed with aqueous dispersions of such polymers. (Bugosh, column 29, lines 1-21). Bugosh is, however, silent regarding activating the boehmite particulate. Furthermore, Bugosh is silent regarding many aspects of the aqueous dispersion of polymers. Nevertheless, the PTO asserts that the compositions of Bugosh inherently have the recited properties, even though Bugosh fails to disclose the “activated” boehmite particulate recited in the present claims. That is, the PTO appears to assert that all compositions that include the boehmite particulate of Bugosh in an amount within the recited range and that include polyacrylic esters inherently have the presently claimed flow and leveling characteristics, in addition to each of the properties recited in the present dependent claims.

A rejection based on inherency requires that the Examiner provide a rational or evidence tending to show inherency. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence must make clear that the missing descriptive material or matter is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. In other words, the alleged inherent characteristic must necessarily flow from the

teachings of the applied prior art. See MPEP 2112. In making an assertion, the PTO can require an Applicant to provide proof of the error of such an assertion and Applicants have done so in the Rule 1.132 Declaration by Dr. Yener.

Firstly, in the reasoning provided to support the assertion of inherency, the PTO cites Bugosh's disclosure of improved leveling. However, such statements by Bugosh are made in reference to floor waxes and not in relation to the aqueous paints subsequently relied upon by the PTO for other elements of the claims.

Secondly, the broadly disclosed compositions of Bugosh that relate to water-based dispersions of polymers or latex emulsions do not necessarily have the cited flow and leveling characteristics sag resistance or set to touch dry times, and thus, Bugosh does not inherently disclose the claimed composition. In other words, if an aqueous dispersion including one of the cited polymers and an amount of boehmite particulate between 1 and 40% can be formed without having the recited flow and leveling property, the recited flow and leveling properties do not necessarily follow from the teachings of Bugosh and thus, are not inherent to the teachings of Bugosh. Based on the statements by Dr. Yener in the Declaration that the activation of boehmite leads to the claimed properties and that Bugosh fails to teach such activation, in conjunction with the rheology data provided in the Declaration, it is clear that the claimed flow and leveling properties do not necessarily follow from the teachings of Bugosh.

Even the more specific assertion by the PTO is incorrect. It appears that the PTO is asserting that all aqueous dispersions that have 20% or 2% boehmite particulate have the presently claimed flow and leveling characteristics, as well as other properties recited by dependent claims, even in the absence of any clear description of a composition by Bugosh. Applicants provided clear evidence in the Declaration by Dr. Yener that activating boehmite particles present in amounts as high as 20% influences the rheology of surface coating solutions, leading to the presently claimed properties, thus explaining why the PTO's assertions of inherency are incorrect. Clearly, all of the dispersions relied upon by the PTO do not necessarily have the claimed properties, and thus, the claims properties do not inherently follow from the teachings of Bugosh.

While the PTO acknowledges the Rule 1.132 Declaration provided by Dr. Yener, the PTO ignores the Declarations for reasons not related to whether the teaching of Bugosh necessarily lead to the claimed features. In particular, the breadth of the previously presented claims does not contribute to a conclusion of whether the teachings of Bugosh necessarily lead to a composition including 0.1wt% to 20wt% activated boehmite particulate and having the claimed flow and leveling characteristics. In fact, the PTO states that there would be no guarantee that 20 wt% activated boehmite particles in any surface coating base would provide the instant recite properties of such flow and leveling of at least 6 mils. This statement, in and of itself, proves that it is the PTO's position that the teachings of Bugosh do not necessarily lead to a composition having the claimed flow and leveling characteristics and thus, do not inherently lead to the recited claimed features.

Further, the PTO asserts that it would be easier to add amounts of activated boehmite particles in commercial paints found in home improvement stores. However, such an experiment would demonstrate little relative to the disclosure of Bugosh and its inherent features. Moreover, Applicants have presented an example (Example 2 of the present specification) providing evidence that commercial paints do not necessarily have the claimed flow and leveling characteristics. It is the Applicants position that the methods expressed in the present application lead to the claimed compositions that can have the recited flow and leveling characteristics. Further, it appears that the PTO fails to recognize Example 2 of the present specification in which Applicants clearly demonstrate both a method of forming a paint using commercial materials in addition to the activated boehmite particulate and an example of a traditional paint formulation, demonstrating that not all commercial paint formulations have the recited flow and leveling characteristics. In reality, the experiment suggested by the Examiner of simply adding activated boehmite to commercial paints would more than likely yield an inoperable viscous mass unsuitable for surface coating.

As such, the disclosure of Bugosh is deficient. It clearly fails to teach or suggest "activated" boehmite particulate, and the teachings of Bugosh do not necessarily lead to the claimed features, and thus, the claimed features are not inherent based on the teachings of Bugosh.

For at least the foregoing reasons, claims 1, 4, 6, 7, 10-22, 24, and 26-34 are not anticipated by and are patentable over Bugosh. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 102(b) and 35 U.S.C. 103(a) rejection.

4. Claims 1, 4, 6, 7, 10-22, 24, and 26-34 were rejected under 35 U.S.C. 103(a) over Bugosh and Gernon et al. (U.S. 2006/0106129 A1, hereinafter Gernon). Applicants respectfully traverse this rejection.

As disclosed above, Bugosh fails to teach or suggest use of activated boehmite particulate and is thus deficient with respect to the present claims. Accordingly, the PTO turns to Gernon. Gernon is directed to a latex paint formulation that includes N-n-butyl ethanolamine (BAE) as a neutralizing agent. (Gernon, Abstract). Gernon generally disclosed the use of surfactants as leveling agents and rheology modifiers such as ACRYSOL® RM-1020, which is an associate of rheology modifier. (Gernon, column 3, paragraph 34-57).

The PTO appears to assert that, because some paints that use associative thickeners as taught by Gernon have a pH greater than 7 and have a desirable set-to-touch dry time that, all paints disclosed by Bugosh necessarily have the claim flow and leveling characteristics. In contrast, Applicants in Example 2 clearly show that not all paints having an associative thickener have the recited flow and leveling characteristics. Furthermore, the present claims specifically preclude surface coating solutions that include associative thickeners.

Moreover, it is unreasonable to conclude that, because one paint disclosed in the literature has a specific pH and includes associative thickeners that provide a desirable set-to-touch dry time, the broad disclosure of Bugosh, which does not mention associative thickeners, necessarily results in a paint having the recited features of the present claims, including “activated” boehmite particulate in amounts of 0.1 wt% to 20 wt% and the recited flow and leveling characteristics, in addition to being free of associative thickener. The fact that an associative thickener can provide a desirable viscosity, set-to-touch dry time, or even leveling characteristic does not show that Bugosh necessarily and thus, inherently discloses a latex solution having the claimed “activated” boehmite particulate and flow and level characteristics and that is free of associative thickener.

For at least the foregoing reasons, claims 1, 4, 6, 7, 10-22, 24, and 26-34 are patentable over Bugosh and Gernon. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 103(a) rejection.

5. Claims 1, 6, 7, 10-12 and 15-21 were rejected under 35 U.S.C. 102(e) as anticipated by or in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshino et al. (U.S. 6,576,324, hereinafter Yoshino). Claims 1, 6, 7, 10-12, and 15-21 were also rejected under 35 U.S.C. 103(a) as obvious over Yoshino. Applicants respectfully traverse these rejections.

With regard to Yoshino, Yoshino is directed to a printing medium provided on a base material with a porous ink receiving layer which includes an alumina hydrate and a binder. Yoshino is silent regarding flow and leveling values, sag resistance, set-to-touch dry time, shear viscosity recovery, and pH. However, the PTO asserts that the composition of Yoshino inherently meets the claimed flow and leveling values, sag resistance, dry time, low shear recovery and pH.

The PTO again appears to assert inherency. In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that allegedly inherent characteristic necessarily flows from the teachings of the prior art. (See MPEP 2112). With respect to Yoshino, the PTO argues that the mere presence of platelet shaped boehmite particulate in the dispersions of polyvinyl alcohol disclosed by Yoshino necessarily and thus, inherently leads to surface coatings with the claimed properties. Applicants in a Rule 132 Declaration presented by Dr. Yener clearly demonstrated that the mere presence of boehmite particulate in amounts up to 20 wt%, absent activation, do not yield a rheology that leads to the claim flow and leveling characteristics. Instead, Applicants demonstrated that upon activation, the boehmite particulate yields a rheology that results in the claimed flow and leveling characteristics. Yoshino fails to teach or suggest activating. Thus, Applicants have provided evidence that clearly refutes the PTO's reasoning regarding inherency based on the disclosure of Yoshino. Nevertheless, the PTO merely reasserts that the compositions inherently have the claimed features without providing any subsequent reasoned statement, contrary to what would be reasonably expected based on the requirements outlined in MPEP 2112.

Accordingly, Yoshino fails to teach or suggest activated boehmite particulate. In addition Yoshino fails to disclose, explicitly or inherently, a composition having the claimed properties

For at least the foregoing reasons, claims 1, 6, 7, 10-12 and 15-21 are not anticipated by and are patentable over Yoshino. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 102(e) rejection and the 35 U.S.C. 103(a) rejection.

6. Claims 1, 6, 7, 10-22, 24, and 26-34 were rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Napier (U.S. 3,357,791, hereinafter Napier). Applicants respectfully traverse this rejection.

Napier is directed to a process for producing colloidal sized particles of alumina monohydrate. Napier further discloses that fibrous boehmite may be used at a concentration of 0.5 to 25% in aqueous floor wax emulsions or pastes utilizing conventional components. (Napier, col. 11, ll. 63-71). Napier is silent regarding activation of anisotropic boehmite particles and does not teach or suggest the claimed flow and leveling characteristics. Moreover, such properties are not inherent in the disclosure of Napier as stated in the Rule 1.132 Declaration provided by Dr. Yener.

While Napier broadly discloses that fibrous boehmite is useful at concentrations of 0.5 to 25% as a thickener, disbursement or emulsifying agent in aqueous floor wax emulsions, such broad disclosure does not lead to the inherent disclosure of the claimed invention. As noted above, an assertion of inherency requires that the PTO provide a logic or reasoning demonstrating that the disclosure of the prior art necessarily leads to the elements of the claimed invention. Such broad disclosure by Napier (a direct copy of a paragraph from Bugosh) is clearly inadequate to necessarily lead to each and every feature of the claimed invention. Moreover, Applicants have demonstrated that absent activation, solutions including boehmite particulate have very different rheologies. The PTO's reasoning that the mere presence of boehmite in an aqueous solution leads to the claimed properties has been shown by the Declaration provided by Dr. Yener to be incorrect. Subsequently, the PTO has failed to provide a reasoned statement as to why each and every claimed feature is inherently disclosed by the Napier reference. In reality, Napier fails to teach or suggest, explicitly or inherently, each and every element of the presently claimed invention.

For at least the foregoing reasons, claims 1, 6-7, 10-22, 24, and 26-34 are not anticipated by and are patentable over Napier. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 102(b) rejection and 35 U.S.C. 103(a) rejection.

7. Claims 1, 4, 6, 7, 10-22, 24 and 26-34 were rejected under 35 U.S.C. 103(a) as obvious over Napier with or without Bugosh and in further view of Gernon. Applicants respectfully traverse this rejection.

Here again, both Napier and Bugosh, a copy of the same paragraph, disclose that a fibrous boehmite is useful in concentrations of 0.5 to 25 wt% in aqueous floor wax emulsions or paste. The PTO asserts that such a broad disclosure inherently leads to each and every one of the claimed features, citing Gernon as supporting the position of inherence because Gernon discloses a latex paint (not an aqueous floor wax emulsion) that utilizes an associate of thickener and has a pH greater than 7. At present, the claims preclude the use of an associative thickener. Furthermore, the fact that an associative thickener may lead to desirable characteristics in a latex paint, indicates nothing about the properties resulting from the use of boehmite, activated or otherwise, in aqueous floor wax emulsions.

For at least the foregoing reasons claims 1, 4, 6, 7, 10-22, 24, and 26-34 are patentable over Napier with or without Bugosh in further view of Gernon. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 103(a) rejection.

Applicant(s) respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

Should the Examiner deem that any further action by the Applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to telephone Applicants' undersigned representative at the number listed below.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

6.25.08

Date

  
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